Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A failure sensing device of a vehicle control system including a control unit ~~(100, 110, 120)~~ generating a control target based on an operation request for controlling a driving state of a vehicle by manipulating a corresponding actuator using the generated control target, and a processing unit ~~(200, 300)~~ connected to said control unit ~~(100, 110, 120)~~ by a network, for generating and providing to said control unit ~~(100, 110, 120)~~ additional information to be used to modify said operation request or said control target, as necessary, at said control unit ~~(100, 110, 120)~~, wherein

said failure sensing device is provided to said control unit ~~(100, 110, 120)~~ with smaller control load, and includes

an output portion outputting information to said processing unit ~~(200, 300)~~ with greater control load,

a receiving portion receiving a response corresponding to said information from said processing unit ~~(200, 300)~~, and

a sensing portion sensing a failure in said processing unit ~~(200, 300)~~ based on said information and said response.

2. (Currently Amended) The failure sensing device according to claim 1, wherein said information is input data for calculation at said processing unit ~~(200, 300)~~, and said receiving portion receives as a response a calculation result of said input data substituted into a predetermined calculation formula at said processing unit ~~(200, 300)~~.

3. (Currently Amended) The failure sensing device according to claim 1, wherein

said control unit (100, 110, 120) further includes a diagnosing portion diagnosing a failure in itself.

4. (Currently Amended) The failure sensing device according to claim 1, wherein said control unit (100, 110, 120) is configured by multiplexed calculating units.

5. (Currently Amended) The failure sensing device according to claim 1, wherein said control unit (100, 110, 120) further includes a determining portion determining interruption of control in which additional information from said processing unit (200, 300) is reflected, when a failure of said processing unit (200, 300) is sensed by said sensing portion.

6. (Currently Amended) The failure sensing device according to claim 1, wherein said control unit (100, 110, 120) is configured by a plurality of control units (100, 110, 120) controlling an operation of a vehicle, and

said control unit (100, 110, 120) further includes a sensing portion sensing a failure in said processing unit (200, 300) based on a plurality of sensing results from sensing portions included in said plurality of control units (100, 110, 120).

7. (Currently Amended) The failure sensing device according to claim 6, wherein priorities as to failure sensing are assigned to said plurality of control units (100, 110, 120).

8. (Currently Amended) The failure sensing device according to claim 7, wherein control units (100, 110, 120) with smaller control loads are given higher priorities.

9. (Currently Amended) A failure sensing device of a vehicle control system including a control unit (100, 110, 120) generating a control target based on an operation request for controlling a driving state of a vehicle by manipulating a corresponding actuator using the generated control target, and a processing unit (200, 300) connected to said control unit (100, 110, 120) by a network, for generating and providing to said control unit (100, 110, 120) additional information to be used to modify said operation request or said control target, as necessary, at said control unit (100, 110, 120), wherein

said failure sensing device is provided to said control unit (100, 110, 120) with smaller control load, and includes

an output portion outputting information to said processing unit (200, 300) with greater control load,

a receiving portion receiving a response corresponding to said information from said processing unit (200, 300), and

a sensing portion sensing a failure in said processing unit (200, 300) based on said information and said response, wherein

units in said vehicle control system are hierarchically configured, and

said control unit (100, 110, 120) is arranged hierarchically lower than said processing unit (200, 300).

10. (Currently Amended) A failure sensing device of a vehicle control system including a control unit (100, 110, 120) generating a control target based on an operation request for controlling a driving state of a vehicle by manipulating a corresponding actuator using the generated control target, and a processing unit (200, 300) connected to said control unit (100, 110, 120) by a network, for generating and providing to said control unit (100, 110,

120) additional information to be used to modify said operation request or said control target, as necessary, at said control unit (100, 110, 120), wherein

said failure sensing device is provided to said control unit (100, 110, 120) with smaller control load, and includes

outputting means for outputting information to said processing unit (200, 300) with greater control load,

receiving means for receiving a response corresponding to said information from said processing unit (200, 300), and

sensing means for sensing a failure in said processing unit (200, 300) based on said information and said response.

11. (Currently Amended) The failure sensing device according to claim 10, wherein said information is input data for calculation at said processing unit (200, 300), and said receiving means includes means for receiving as a response a calculation result of said input data substituted into a predetermined calculation formula at said processing unit (200, 300).

12. (Currently Amended) The failure sensing device according to claim 10, wherein said control unit (100, 110, 120) further includes diagnosing means for diagnosing a failure in itself.

13. (Currently Amended) The failure sensing device according to claim 10, wherein said control unit (100, 110, 120) is configured by multiplexed calculating units.

14. (Currently Amended) The failure sensing device according to claim 10, wherein

said control unit (100, 110, 120) further includes means for determining interruption

of control in which additional information from said processing unit (200, 300) is reflected,

when a failure of said processing unit (200, 300) is sensed by said sensing means.

15. (Currently Amended) The failure sensing device according to claim 10, wherein

said control unit (100, 110, 120) is configured by a plurality of control units (100, 110,

120) controlling an operation of a vehicle, and

said control unit (100, 110, 120) further includes means for sensing a failure in said

processing unit (200, 300) based on a plurality of sensing results from sensing means

included in said plurality of control units (100, 110, 120).

16. (Currently Amended) The failure sensing device according to claim 15, wherein

priorities as to failure sensing are assigned to said plurality of control units (100, 110, 120).

17. (Currently Amended) The failure sensing device according to claim 16, wherein

control units (100, 110, 120) with smaller control loads are given higher priorities.

18. (Currently Amended) A failure sensing device of a vehicle control system

including a control unit (100, 110, 120) generating a control target based on an operation

request for controlling a driving state of a vehicle by manipulating a corresponding actuator

using the generated control target, and a processing unit (200, 300) connected to said control

unit (100, 110, 120) by a network, for generating and providing to said control unit (100, 110,

120) additional information to be used to modify said operation request or said control target,

as necessary, at said control unit (100, 110, 120), wherein

-7-

said failure sensing device is provided to said control unit (100, 110, 120) with smaller control load, and includes

outputting means for outputting information to said processing unit (200, 300) with greater control load,

receiving means for receiving a response corresponding to said information from said processing unit (200, 300), and

sensing means for sensing a failure in said processing unit (200, 300) based on said information and said response, wherein

units in said vehicle control system are hierarchically configured, and

said control unit (100, 110, 120) is arranged hierarchically lower than said processing unit (200, 300).